

March 30, 2018

William F. Lane, General Counsel  
Michael Abraczinskas, Director, Division of Air Quality  
NC Department of Environmental Quality  
Raleigh, NC 27699

Re: Chemours - Fayetteville Works - Emissions Test Report

Dear Messrs. Lane and Abraczinskas,

Attached is the Emissions Test Report prepared for Chemours by Weston Solutions, which provides the results of stack testing conducted at the Fayetteville Works between February 26 and March 2, 2018, for emissions to air of HFPO Dimer Acid from (i) the Vinyl Ethers South stack, and (ii) the Polymer Processing Aid ("PPA") stack.

This is the second stack testing report we are submitting. The first stack testing report, for testing done between January 22 and 25, was submitted on March 12, 2018. A third round of stack testing for HFPO Dimer Acid was done during the week of March 19, 2018, and we will provide DEQ with the results when available.

In our letter accompanying the earlier submission (attached), we emphasized three points, each of which remains valid in light of the new test results:

- ∞ The results are compliant with the facility's Clean Air Act permit.
- ∞ The results show that the maximum annual ambient air levels for HFPO Dimer Acid in the residential areas surrounding the facility are well within safe levels, even under the State's conservative 140 parts per trillion provisional health goal for drinking water.
- ∞ As we have discussed, we expect that the results will be further reduced in short order, when Chemours installs new abatement equipment by May 25, to reduce substantially the levels of HFPO Dimer Acid emissions from these stacks. We also recently discussed with you how Chemours plans to move forward with the installation of state-of-the-art equipment that is expected to capture over 99.99% of these emissions.

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## Summary of the Test Results

The second stack testing was done for two purposes. First, it was done at DAQ's request to test Chemours's understanding that there would be little if any HFPO Dimer Acid emissions when either Vinyl Ethers plant was running a campaign other than PPVE. The Vinyl Ethers South stack was accordingly tested during a PMVE/PEVE campaign. The results of the two runs conducted confirmed the company's understanding that any emissions of HFPO Dimer Acid would be very low: they showed an average emission rate of 0.000937 pounds per hour, about 300 times lower than the average emissions rate found during the first stack test while Vinyl Ethers North was running PPVE. This translates to about 8 pounds a year while Vinyl Ethers South is running PMVE or PEVE.<sup>1</sup>

Second, testing was done to understand the variability that was seen in the emissions from the PPA stack during the three runs from the first test in January. The second test was designed to determine the effect of two batch processes, vaporization and hydrolysis, on HFPO Dimer Acid emissions. The results have allowed the facility to calculate, based on the time the relevant processes were running, total emissions from the PPA stack for 2017 of approximately 670 pounds. (In addition, the facility estimates 36 pounds of outdoor fugitive emissions from the PPA plant for 2017).

## The Results Show that Chemours is in Compliance with its Clean Air Act Permit

Our March 12<sup>th</sup> letter discussed the Fayetteville Works' Clean Air Act Title V Air Quality Permit No. 03735T43, issued by DAQ on December 14, 2016. Under the permit, there are no emissions limits for HFPO Dimer Acid or Dimer Acid Fluoride as individual pollutants, as those chemical species are not regulated as such under the Clean Air Act. Rather, these compounds fall within the category of volatile organic compounds ("VOCs"). However, there are no VOC permit limits for either the PPA stack or the Vinyl Ethers South plant.

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<sup>1</sup> Considering the various campaigns that are run at Vinyl Ethers South, the facility has calculated annual emissions from the Vinyl Ethers South stack of approximately 202 pounds for 2017. The substantial majority of these emissions from 2017 occurred while Vinyl Ethers South was running PPVE, and Vinyl Ethers South will not be running PPVE in 2018. Note also that these emissions were calculated taking into account the aborted stack test, but excluding the aborted test does not materially change the results of the calculation.

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## The Results Are Well within the State's Provisional Health Goal for HFPO Dimer Acid

Our March 12<sup>th</sup> letter described work that ERM, a leading expert firm, had done to model and calculate how the emissions results in the first report would translate into an air emissions exposure that can be compared to the State's provisional health goal for drinking water. As we described in the letter, and in a subsequent telephonic briefing of DAQ, the ERM work showed that the stack testing results translate into a maximum exposure on an annual average basis equivalent to 20-90 ppt in drinking water for the closest residences to the facility—well below the 140 ppt drinking water level (and even further below the 560 ppt level for sources other than drinking water).

At the time, ERM used the results from the first round of stack testing at the PPA stack in two alternative ways. Because of the variability observed, it used (i) the average of the first and the third runs, which was much lower than the second, and (ii) the average of all three runs, and ran the model under both assumptions, which accounts for much of the 20-90 ppt range. We believe that with the benefit of the second stack test, the actual average emission rate is between the one used in the two alternatives, so the modelled exposure is still within the 20-90 ppt equivalent range. Once the third round of testing results are available, ERM will rerun the model with all available data, and we will share the results with DEQ.

## Chemours is Moving Expeditiously to Substantially Reduce HFPO Dimer Acid Emissions


Finally, our March 12<sup>th</sup> letter described how Chemours is moving expeditiously to substantially reduce air emissions. That work remains on track and on schedule. Among other things, the facility expects to have operational in 8 weeks, by May 25, 2018: (i) the carbon system at the PPA facility to control both emissions from indoor leaks as well as from the facility scrubber, and (ii) the carbon system at the Vinyl Ethers North facility to capture and control indoor leak emissions. These systems are expected to substantially reduce ongoing air emissions from the facility until a more comprehensive abatement system can be installed. Moreover, as Chemours representatives explained to you at a meeting last week, the Company is committed to moving forward with the installation of a state-of-the-art abatement technology that is expected to be at least 99.99% effective for controlling air emissions of HFPO Dimer Acid and other PFAS compounds.

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Please let me know if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Joel M. Gross". The signature is fluid and cursive, with the first name "Joel" being more prominent than the last name "Gross".

Joel M. Gross

Cc:

Sheila Holman, Deputy Secretary, DEQ

Michael Pjetraj, Deputy Director, DAQ

Francisco Benzoni, Office of the Attorney General

Asher Spiller, Office of the Attorney General

Sheryl Telford, Chemours

John F. Savarese, Wachtell, Lipton, Rosen & Katz

Jeffrey M. Wintner, Wachtell, Lipton, Rosen & Katz

R. Steven DeGeorge, Robinson Bradshaw